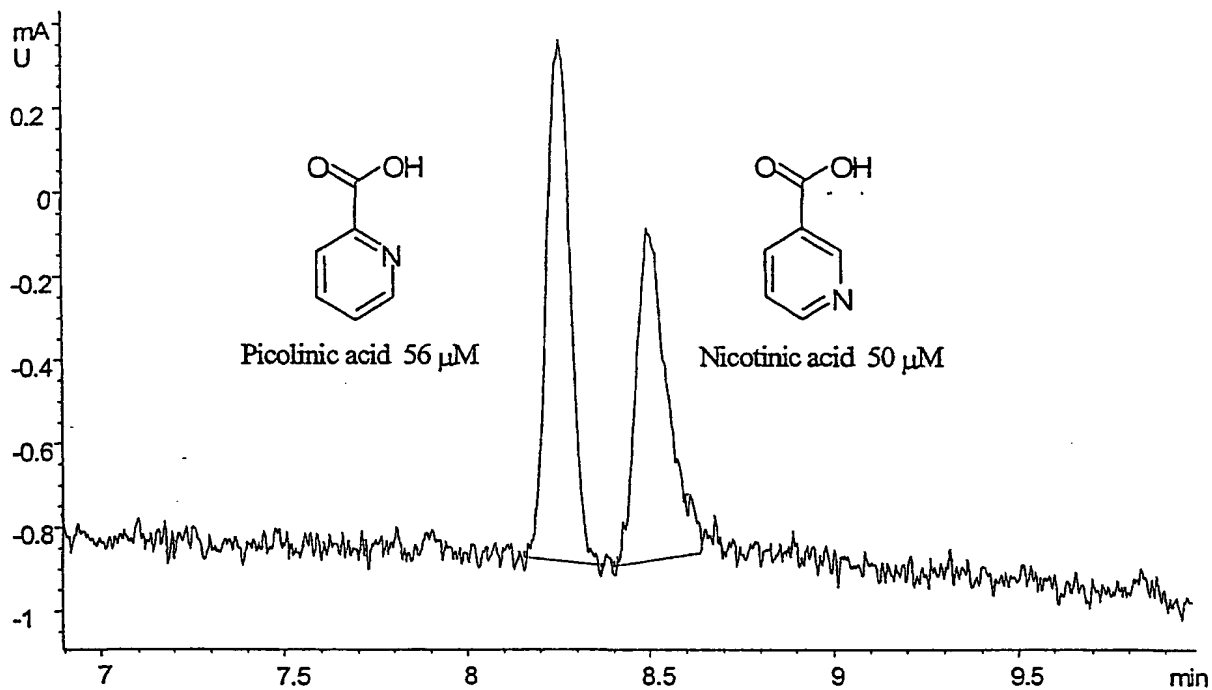
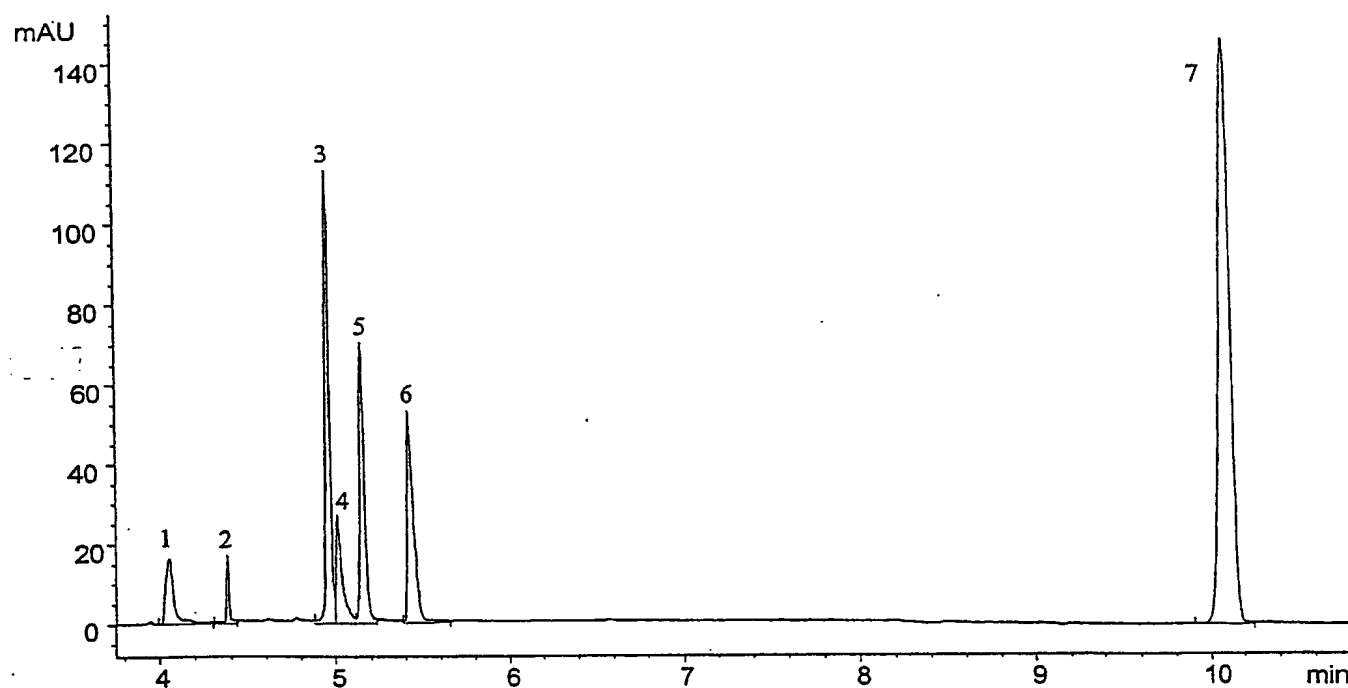


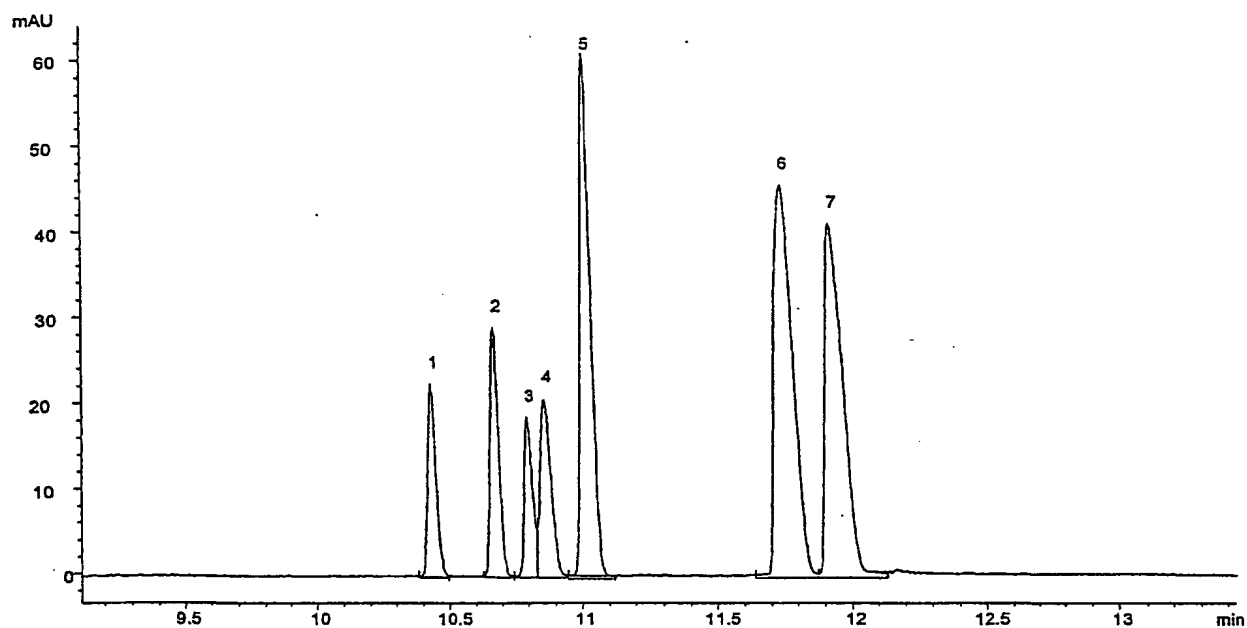
**Figure 1:** analysis conditions: fused silica capillary  $\phi = 50 \mu\text{m}$ ,  $L_{\text{tot}} = 60 \text{ cm}$ , 50 mM borate buffer,  $\text{pH} = 9.0$ , + 15 kV,  $T = 20^\circ\text{C}$ ,  $\lambda = 210 \text{ nm}$ .



**Figure 2:** analysis conditions: fused silica capillary, pre-treated for 5 min with a 1 mM solution of compound (1),  $\phi = 50 \mu\text{m}$ ,  $L_{\text{tot}} = 60 \text{ cm}$ , 25 mM borate buffer, pH = 9.0, - 20 kV,  $T = 20^\circ\text{C}$ ,  $\lambda = 210 \text{ nm}$ .

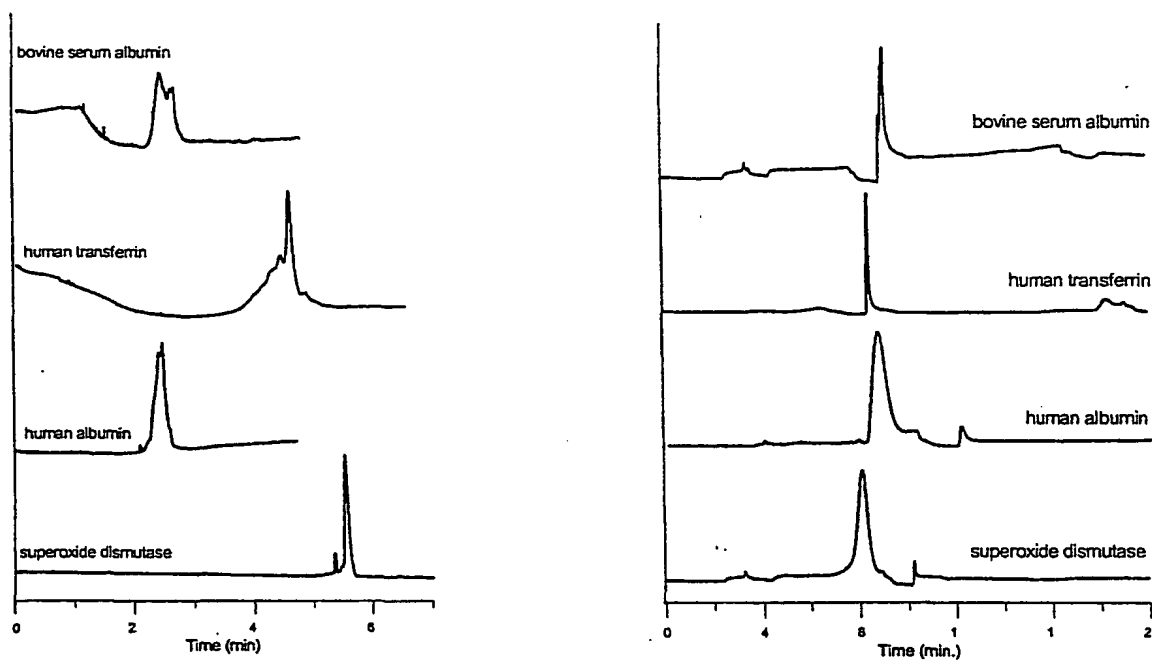


**Figure 3:** analysis conditions: fused silica capillary,  $\phi = 50 \mu\text{m}$ ,  $L_{\text{tot}} = 60 \text{ cm}$ , 25 mM borate buffer, pH = 8.5, - 20 kV,  $T = 20^\circ\text{C}$ ,  $\lambda = 210 \text{ nm}$ . Analyte concentration: 0.2 mg/ml.

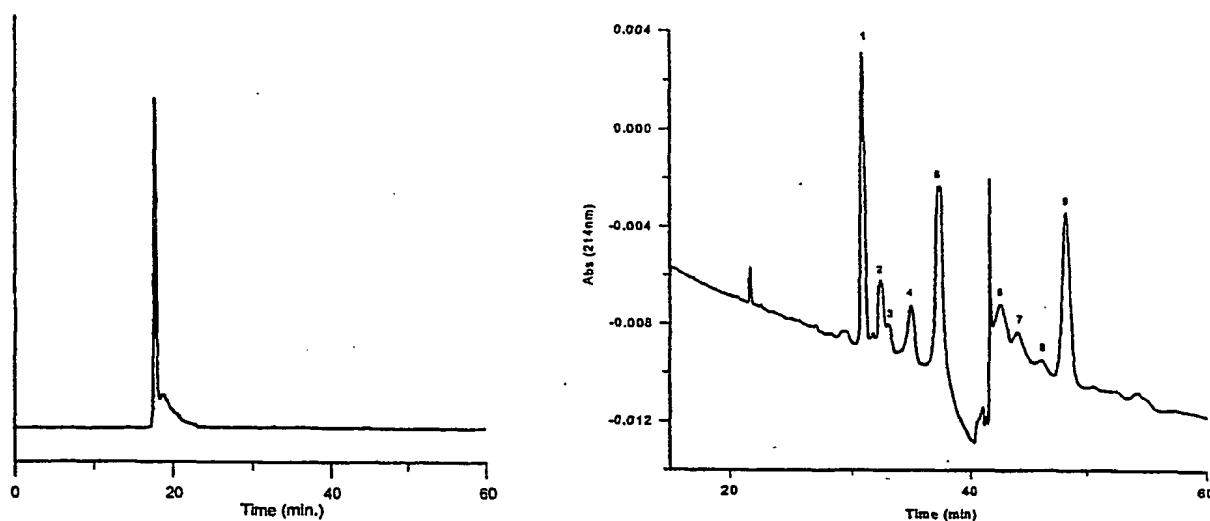


**Figure 4:** analysis conditions: fused silica capillary  $\phi = 50 \mu\text{m}$ ,  $L_{\text{tot.}} = 100 \text{ cm}$ , 25 mM borate buffer, pH = 8.5, - 25 kV,  $T = 25^\circ\text{C}$ ,  $\lambda = 210 \text{ nm}$ . Analyte concentration: 0.14 mg/ml.



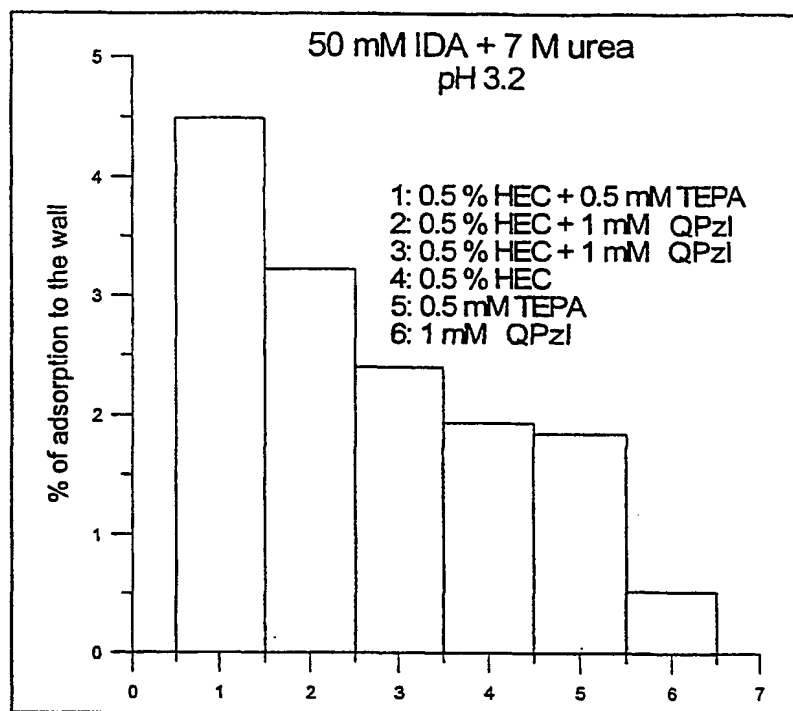


**Figure 6:** Separation of a number of protein markers, injected in a covalently coated (left) and in a Q-PzI treated (right) capillary, respectively. Capillary length 37 cm, 50  $\mu$ m i.d.. Separation conditions were: run at 200 V/cm, sample injection by pressure for 2 sec, 5 psi/s, detection at 214 nm. In both cases the running buffer was 25 Mm Na tetraborate, Ph 9.0.



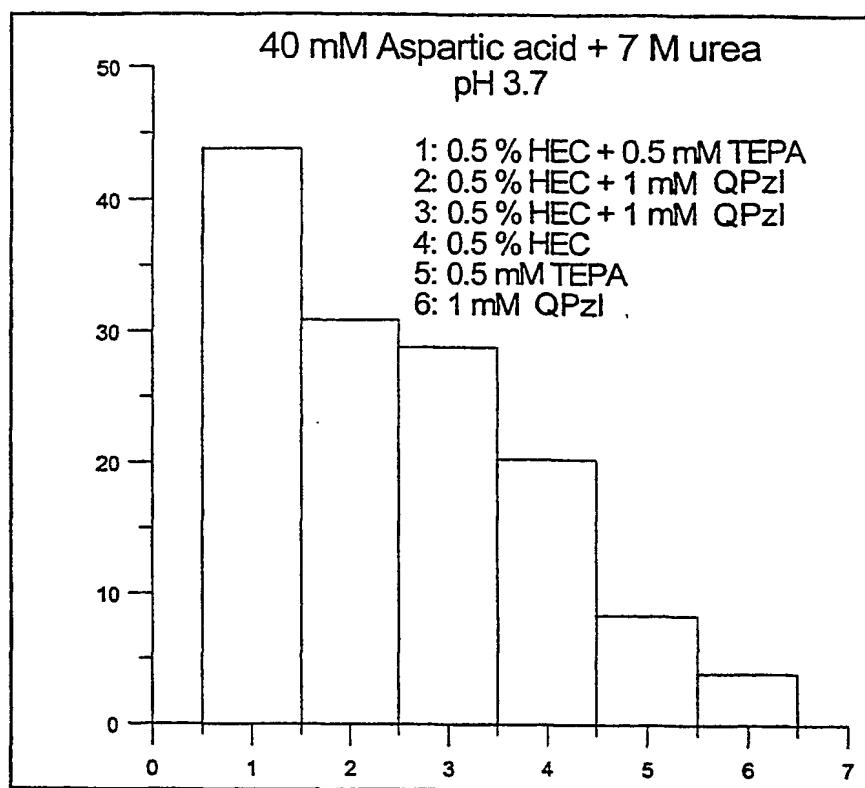
**Figure 7:** Separation of protein mixture with  $P_i$  ranging from Ph 3-10 (right) with QpzI treated capillary 77 cm long, 50  $\mu$ m i.d.; (left) covalently coated capillary, 77 cm long, 50  $\mu$ m, i.d..

Separation conditions: 250V/cm, sample injection by pressure for 5 sec, running in tetraborate buffer Ph 9.0. (1) Horse myoglobin, (2) bovine carbonicanhydrase B, (3) human carbonicanhydrase B, (4)  $\beta$ -lactoglobulin A, (5) soybean trypsin inhibitor, (6) lentil-lectin  $P_i$  8.15 (7) lentil-lectin  $P_i$  8.55, (8) lentil-lectin  $P_i$  8.65, (9) trypsinogen



**Figure 8:** inhibition ability of different additives to the binding of proteins to the silica wall. The electrophoretic runs have been performed in 50 mM IDA buffer, in presence of 8 M urea (apparent Ph of 3.2) in Waters Quanta 4000E instrument, in a 27-cm-long uncoated capillary, 50  $\mu$ m ID. Sample: mixture of  $\alpha$  and  $\beta$  human globin chains, 2 mg/ML. After 10 consecutive runs, the adsorbed proteins are eluted electrophoretically in 25 mM phosphate buffer, Ph 7, containing 60 mM SDS and detected at 210 nm.





**Figure 9:** inhibition capability of various additives toward the adsorption of proteins to the silica wall. The electrophoretic runs have been executed in 50 mM Asp buffer in presence of 8 M urea (apparent pH 3.8) in a Waters Quanta 4000E instrument, in 27-cm-long, uncoated capillary, 50  $\mu$ m ID. Buffer: a mixture of  $\alpha$  e  $\beta$  human globin chains, 2 mg/mL. After 10 consecutive runs, the adsorbed proteins are eluted electrophoretically in 25 mM phosphate buffer, pH 7, containing 60 mM SDS and detected at 210 nm.